

12DK7

Twin Diode—Power Tetrode

9-PIN MINIATURE TYPE

For Automobile Radio Receivers Operating
Directly from 6-Cell Storage Batteries

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage range (DC). 10 to 15.9 volts

*For longest life, it is recommended that the heater be
operated within the voltage range of 11 to 14 volts.*

Current (Approx.) at 12.6 volts 0.5 amp

Characteristics, Class A₁ Amplifier (Tetrode Unit):

Heater Voltage. 12.6 volts

Plate Voltage 12.6 volts

Grid-No.2 Voltage 12.6 volts

Grid-No.1 Resistor (Bypassed) 2.2 megohms

Plate Resistance (Approx.) 4000 ohms

Transconductance. 5000 μ mos

Plate Current 6 ma

Grid-No.2 Current 1 ma

Mechanical:

Operating Position. Any

Maximum Overall Length. 2-5/8"

Maximum Seated Length 2-3/8"

Length, Base Seat to Bulb Top (Excluding tip) 2" $\pm$ 3/32"

Diameter. 0.750" to 0.875"

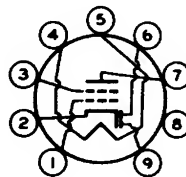
Dimensional Outline See *General Section*

Bulb. T6-1/2

Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)

Basing Designation for BOTTOM VIEW. 9HZ

Pin 1—Tetrode
Grid No.1
Pin 2—Cathode
Pin 3—Tetrode
Grid No.2
Pin 4—Heater
Pin 5—Heater



Pin 6—Diode-No.2
Plate
Pin 7—Tetrode Plate
Pin 8—Internal Con-
nection—
Do Not Use
Pin 9—Diode-No.1
Plate

TETRODE UNIT — AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 30 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 30 max. volts

PLATE CURRENT 10 max. ma

PLATE DISSIPATION 0.5 max. watt

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 30 max. volts

Heater positive with respect to cathode. 30 max. volts



RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

DATA
3-61

12DK7

Typical Operation:

Heater Voltage.	12.6	volts
Plate Voltage	12.6	volts
Grid-No.2 Voltage	12.6	volts
Grid-No.1 Voltage	<i>Obtained by rectification through 15-megohm grid-No.1 resistor</i>	
Peak AF Grid-No.1 Voltage from 0.2-megohm signal source	1.4	volts
Zero-Signal Plate Current	6	ma
Max.-Signal Plate Current	2.5	ma
Load Resistance	3500	ohms
Total Harmonic Distortion	10	%
Max.-Signal Power Output.	10	mw

Maximum Circuit Values:

Grid-No.1-Circuit Resistance.	15 max.	megohms
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DIODE UNITS — Two

Values are for Each Unit

Characteristics, Instantaneous Test Condition:

Heater Voltage.	12.6	volts
Plate Current for plate volts = 10.	1	ma

